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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,660	04/11/2001	Eddie Daems	210484	1837

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LEYDIG VOIT & MAYER, LTD
TWO PRUDENTIAL PLAZA, SUITE 4900
180 NORTH STETSON AVENUE
CHICAGO, IL 60601-6780

EXAMINER	
SAGAR, KRIPA	

ART UNIT	PAPER NUMBER
1756	9

DATE MAILED: 09/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/832,660	DAEMS ET AL.	
	Examiner	Art Unit	
	Kripa Sagar	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The amendment filed 7/11/03 is not compliant with the modified format.

Claims 1-19 were cancelled in a preliminary amendment filed 4/11/01; this should be indicated in the amendments.

Since the current amendments are not substantial, the amendments have been entered. Claims 20-38 are under consideration.

Specification

2. The disclosure is objected to because of the following informalities: The specification should refer to Fig.1 on p.5, #3 and in subsequent sections describing the layers.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim recites a limitation "wherein the steps (a) to (d) are performed within a period of less than two months."

The specification states that "on-site preparation" implies performing steps (a) to (d) in less than two months (p.5, #2); whereas the crux of the invention lies in a

shortened time period between lamination and use (p.3; # 5). The latter allegedly minimizes the diffusion of monomers between the UV layer and the image-recording layer. Applicant has not claimed the invention since the elapsed time between any two steps is ambiguous as written.

This rejection can be overcome by amending the claim to read "wherein the steps (a) and (b) are performed within a period of less than two months."

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

6. Claims 20,21, 27-33,35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. 5262275 to Fan in view of US Pat. 6143470 to Nguyen et al.

The instant claims disclose a method of forming a relief image using an imaging element on a UV-sensitive relief-forming layer. The imaging element, with a peelable layer, is imaged. The element is used as a conformable mask to expose the UV - sensitive layer and developing it to form the relief image.

Fan discloses a flexographic printing element comprising a barrier layer and an infrared (IR) sensitive imaging layer on a photo-polymerizable layer. Fan teaches laminating the barrier layer and the IR-sensitive layer on the photo-polymerizable layer. The IR-sensitive layer is image-wise exposed by laser ablation. The photo-

polymerizable layer is flood exposed using the layers above as mask. The overlying layers and the non-imaged areas are developed and removed. (2;34-45). A temporary coversheet on the photo-polymerizable layer (if present) is removed prior to lamination(8;27-40). A peelable top layer is optionally included. This top layer on the IR sensitive layer may remain on the laminated composite for storage but is removed prior to imaging by laser ablation. Fan teaches composition of IR sensitive layers (claims 22-23) and includes metals(5; 56-7-45). The top peelable layer(claims 27,32) is a silicone coated mylar layer (15;9-10). A separate development step for removing the IR-sensitive layer and the barrier layer is disclosed (10;51-56). The UV-sensitive material (claims 33,35) may be a photoresist ("photocrosslinkable") or a flexographic ("photopolymerizable") precursor (3;1-10). Fan specifies a barrier layer which is adhered to the UV-sensitive layer by pressure or heat or both. It teaches a peelable protective sheet over the barrier layer (7;66-8;10). Fan teaches that the laminated element may be stored (7;48-50).

Fan provides for a laminated imaging material and does not teach a distinct adhesive layer between the image receiving layer and the UV-sensitive layer.

Nguyen (Fig.3) teaches that an adhesive material (303) would be required when laminating an image-receiving layer (305) to a photosensitive layer (302).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an adhesive layer between the image receiving layer and the photosensitive layer as taught by Nguyen in Fan's lay-up because Nguyen teaches that the adhesive layer facilitates peeling after processing (8;66-67 & Fig.3).

7. Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Fan.

Nguyen teaches laminating an image receiving layer and an adhesive layer onto a UV-sensitive layer on a support. The imaging layer is image exposed to ablative laser writing, and the stack is flood exposed and developed (Fig.3).

Nguyen does not teach a peelable top support or storage for two months.

Fan teaches a peelable top support and states that the laminate can be stored with the support (8;51-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen's stack with Fan's peelable support layer because Fan teaches that it protects the imaging layer from scratches during handling and storage (8;51-60).

8. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan in view of Nguyen as applied to claim 20 above in view of US Pat.5888712 to Lelental et al.

The instant claims recite the limitations on the imaging layer in the mask.

The teachings of Fan and Nguyen have been discusses above. Fan and Nguyen teach the composition of the imaging layer ; however these are directed towards a laser-ablatable process. They do not specify other imaging methods or elements.

Lelental's invention is directed towards forming a conductive layer over imaging layers used in fabricating printing plates. It teaches conventional image forming layers and methods. Such imaging elements include, for example, photographic,

thermographic, electrothermographic, photothermographic, dielectric recording, dye migration, laser dye-ablation, thermal dye transfer, electrostatographic, and electrophotographic imaging elements (12;34-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lelental to include diverse imaging elements in the mask-forming layer taught by Fan with Nguyen's adhesive layer, because Fan teaches the advantages of integrating the mask ("phototool") with the relief-forming layer (1;49-65) and Nguyen teaches a practical method of integration while Lelental teaches numerous image forming elements conventionally available for use in the integrated mask.

9. Claims 34, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan in view of Nguyen as applied to claim 20 above in view of US Pat.4555471 to Barzynski et al.

The claim recites the limitations on the UV sensitive material and peeling off the mask layer as a development step.

The teachings of Fan have been discussed above. It teaches the pre-cursors for a flexographic printing plate. It does not teach the relief layer for a lithographic plate. It teaches laser ablation to image the mask layer (IR-sensitive layer) and provides for development steps to remove the mask layer. It does not teach peeling the mask layer. Nguyen teaches peeling the image-forming stack after exposure. It does not teach a flexographic printing plate.

Barzynski's invention is directed towards a multilayer image recording material used in printing plates. It teaches prior art structures for lithographic printing plates (1; 20-26). It teaches the use of thermographic materials in the imaging layer of the mask. The mask layers and the relief imaging layers are formed separately and laminated. Following the imaging process, the mask layers may be peeled off (7;54-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Barzynski Nguyen and Fan. Fan teaches the advantages of integrating the mask ("phototool") with the relief-forming layer (1;49-65), Nguyen teaches a practical method of integration, while Barzynski teaches that this can be accomplished with a peelable mask that dispenses with the wet processing steps (generally associated with other masks), thereby assuring good quality images during processing (8;57-65).

Response to Arguments

10. Applicant's argument with respect to rejection of claim 20 under 112 is not convincing. As shown above the criticality of the elapsed time between lamination and end-use (imaging, UV-exposure and development) is not unambiguously claimed.

Applicant has argued with respect to the rejections under 35USC 103 that: (a) Fan does not teach *all* the elements of claim 20 (b) Nguyen teaches an adhesive layer but the adhesive is between a UV-sensitive layer and a polymer *transparent to UV.*

Applicant has engaged in selective reading of the references and attacks them individually. In response to applicant's arguments against the references individually,

one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this instance Fan teaches *most* of the elements of the instant claim (Fan: 7;57-8;40). The differences are that (i) Fan does not teach laminating an adhesive layer to the UV-sensitive layer and (ii) the process steps (a) to (d) are not performed in a period of less than two months. Nguyen teaches the use of adhesive layer to join the image-recording element to the UV-sensitive element. The adhesive layer lies directly on the UV-sensitive layer. The argument that a polymer transparent to UV is between the adhesive and an image-recording layer is unconvincing. The emphasis on the UV-transparent polymer is also spurious. The principal teaching of Nguyen is the use of an adhesive layer to join the image-recording element to the UV-sensitive element. The UV transparent barrier layer is the same as that disclosed in the instant invention (layer-5 in fig.1) and its location serves the same function in both instances – a diffusion barrier between the UV-sensitive layer and the image-recording layer. The structural difference is not critical to the principal teaching of the cited reference. Further, it is noted that Applicant, admits prior-art that teaches the use of adhesion layers between the UV-sensitive layer and the image-recording layer (p.3;#1).

The criticality of performing the steps (a) –(d) within two months as claimed by the Applicant is ambiguous as noted above. Applicant has provided examples of the instant process (examples 1-4, pp.11-19); nowhere is there a showing of the elapsed time between lamination and use. The claimed advantages of on-site preparation are

not illustrated. No comparative examples proving unusual or unexpected results of the process are provided. It is particularly noted that the materials used are listed as well known commercially available substances. Further on-site and on-press relief-image processes are common and widely known in the art. This may be readily verified by the most cursory search of the literature – examples of these are provided below.

Applicant has used commercially available materials in a well-known process. No evidence of any benefits or unexpected results is presented.

Conclusion

11. Applicant's invention alleges that the lamination of the image-recording element and the UV-sensitive element is done by the end-user shortly prior to the steps of imaging, UV-exposure and development. This, it is further alleged, reduces the time for monomer diffusion and thereby permits the use of a superior adhesive between the two elements (p.3;#5). Applicant admits that the materials and most of the process-steps of the instant invention are known in prior art (p. 1-3). The only difference between admitted prior-art and the instant invention is the location of the laminating-step ("on-site") and the elapsed time ("<2 mos") between lamination and subsequent steps (p.2;#4). Claim 20 does not recite these limitations. Although the specification defines the term "on-site preparation", its use in the preamble accords it no weight since it merely limits the intended use and does not in any way modify the process steps. The process steps would be the same whether performed on-site or on multiple sites.

The limitation of performing the steps (a) to (d) in less than two months in claim 20 is ambiguous and not in conformance with the invention; this has been indicated in the rejection under 35USC112 above.

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

US Pat.5015553 to Grandmont teaches forming a multilayer imaging-element laminated on-site and used in forming relief images.

US Pat. 6085655 to Harris et al. teaches a multilayer imaging member that can be used for preparing printing plates. The plates are prepared on-site and used immediately.

US.Pat. 6367381 to Kanga teaches modifying a conventional slip-film to include an image recording layer and a UV-absorbing layer; laminating the slip-film on to an UV-sensitive layer and using it on-site.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kripa Sagar whose telephone number is 703-605-4427. The examiner can normally be reached on 8:00AM--5:00PM (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F Huff can be reached on 703-308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

MH/ks
September 9, 2003

MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700